

WHAT IS CLAIMED IS:

1. An integrated filtration and media management system comprising:

a vessel;

at least one mesh bag disposed in said vessel, said mesh bag being filled with a filtration media; and

a hoist positioned for loading and removing mesh bags from said vessel.

2. The integrated filtration and media management system of claim 1 wherein said hoist comprises:

a bearing housing fixedly attached to a side of said vessel;

a support member rotationally mounted in said bearing housing;

and

a winch mounted on said support member, wherein said support member can be rotated to selectively position said winch over said vessel.

3. The integrated filtration and media management system of claim 2 wherein said support member includes a support column rotationally mounted in said bearing housing and extending vertically above said vessel and a support beam attached at a first end to said support column so as to extend horizontally above said vessel, said winch being mounted to said support beam.

4. The integrated filtration and media management system of claim 2 wherein said winch includes a cable and a hook attached to an end of said cable.

5. The integrated filtration and media management system of claim 4 further comprising a multi-point pick having a plurality of outwardly extending arms and a hook connected to each one of said arms, said multi-point pick being hooked to said hook attached to said cable.

6. The integrated filtration and media management system of claim 1 wherein said mesh bag is made of a strong, porous fabric material.

7. The integrated filtration and media management system of claim 1 wherein said mesh bag is substantially circular and has a side opening.

8. The integrated filtration and media management system of claim 7 wherein said vessel defines an inside diameter and said mesh bag has a diameter that is greater than said inside diameter.

9. The integrated filtration and media management system of claim 1 further comprising a pair of reinforcement straps wrapped around said mesh bag, wherein said straps are mutually perpendicular to one another so as to cross on opposite sides of said mesh bag and define a plurality of loops.

10. An integrated filtration and media management system comprising:

a vessel having an inlet conduit and an outlet conduit, said vessel further including a container portion and a lid mounted to said container portion by a davit that allows said lid to be easily positioned on, and removed from, said container portion;

a plurality of mesh bags disposed in said container portion, each one of said mesh bags being filled with a filtration media; and

a hoist positioned for loading and removing said mesh bags from said vessel.

11. The integrated filtration and media management system of claim 10 wherein said hoist comprises:

a bearing housing fixedly attached to a side of said container portion;

a support member rotationally mounted in said bearing housing;  
and

a winch mounted on said support member, wherein said support member can be rotated to selectively position said winch over said vessel.

12. The integrated filtration and media management system of claim 11 wherein said support member includes a support column rotationally mounted in said bearing housing and extending vertically above said lid and a support beam attached at a first end to said support column so as to extend horizontally above said lid, said winch being mounted to said support beam.

13. The integrated filtration and media management system of claim 11 wherein said winch includes a cable and a hook attached to an end of said cable.

14. The integrated filtration and media management system of claim 13 further comprising a multi-point pick having a plurality of outwardly extending arms and a hook connected to each one of said arms, said multi-point pick being hooked to said hook attached to said cable.

15. The integrated filtration and media management system of claim 10 wherein each mesh bag is made of a strong, porous fabric material.

16. The integrated filtration and media management system of claim 10 wherein each mesh bag is substantially circular and has a side opening.

17. The integrated filtration and media management system of claim 16 wherein said container portion defines an inside diameter and each mesh bag has a diameter that is greater than said inside diameter.

18. The integrated filtration and media management system of claim 10 further comprising a pair of reinforcement straps wrapped around each mesh bag, wherein said straps of each pair are mutually perpendicular to one another so as to cross on opposite sides of said mesh bag and define a plurality of loops.

19. The integrated filtration and media management system of claim 10 wherein individual ones of said plurality of mesh bags are filled with different types of filtration media.